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| 09/677,701      | 09/28/2000  | Terrance Dishongh    | 042390.P9481        | 3388             |

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06/03/2003

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EXAMINER

IP, SIKYIN

ART UNIT

PAPER NUMBER

1742

DATE MAILED: 06/03/2003

13

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/677,701

Applicant(s)

DISHONGH ET AL.

Examiner

Sikyin Ip

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2,3,5,6,18-20,22 and 24-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2,3,5,6,18-20,22 and 24-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 2, 3, 5, 6, 18-20, 22, and 24-26 are rejected under 35 U.S.C. § 103 as being unpatentable over USP 3184349 to Burwen in view of USP 3185600 to Dullberg and further teaching of USP 20010035557 to Akram and USP 4961987 to Okuno et al.

4. The Burwen reference(s) disclose(s) the features including the claimed method steps of heating and cryogenic cooling an electronic equipment material (aluminum alloy). The features relied upon described above can be found in the reference(s) at:

col. 2, line 58 to col. 3, line 30. The difference between the reference(s) and the claims are as follows: Burwen does not explicitly disclose said material is a heat sink and larger grain size of the heat sink material would enhance heat dissipation. However, Akram in Figures 1, 3, and 5 and claim 34 disclose(s) heat sink structures and materials include aluminum, copper, etc and their alloys. Dullberg in col. 2, lines 55-70 discloses materials that could be treated by cryogenic cooling. Further Dullberg in col. 3, lines 37-38 teaches to remove the material from the dip tank after the material has reached the quenching medium temperature. This step reads on "immediately bring the material up to room temperature." Therefore, it would have been obvious to one having ordinary skill in the art of the cited references at the time the invention was made to recognize the teaching of Burwen could be used for heat treating a heat sink and/or mounting a heat sink in view of the teaching of Akram (Figures 1, 3, and 5). Moreover, since the claimed heat sink has no structure being defined, it reads on the material and structure as disclosed by Burwen. In re Venner, 120 USPQ 193 (CCPA 1958), In re LaVerne, et al., 108 USPQ 335, and In re Aller, et al., 105 USPQ 233.

5. Okuno et al in col. 2, lines 27-32 teach heat sink material, in col. 4, lines 61-69 disclose larger grain would have better thermal conductivity, and in col. 5, lines 42-55 disclose larger grain could be obtained by higher heating temperature.

Therefore, ordinary skill artisan would recognize the heated material of Burwen would have grain size changed from small to larger size.

### *Response to Arguments*

6. Applicant's arguments filed March 14, 2003 have been fully considered but they are not persuasive.

7. Applicants argue that cited references fail to disclose the step of immediately bring the temperature of the quenched material to room temperature. But, "immediately" is a relative term which fails to be defined in temperature and time such as heating rate. Thus, said step reads on the step of removing the quenched material from dip tank after the quenched material has reached the quenching medium temperature as taught by Dullberg (see Dullberg, col. 3, lines 37-38).

### *Conclusion*

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

9. The above rejection relies on the reference(s) for all the teachings expressed in the text(s) of the references and/or one of ordinary skill in the metallurgical art would have reasonably understood or implied from the text(s) of the reference(s). To emphasize certain aspect(s) of the prior art, only specific portion(s) of the text(s) have been pointed out. Each reference as a whole should be reviewed in responding to the rejection, since other sections of the same reference and/or various combination of the cited references may be relied on in future rejection(s) in view of amendment(s).

All recited limitations in the instant claims have been met by the rejections as set forth above.


Applicant is reminded that when amendment and/or revision is required, applicant should therefore specifically point out the support for any amendments made to the disclosure. See MPEP § 2163.06 (a) and 37 C.F.R. § 1.119.

***Examiner Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Ip whose telephone number is (703) 308-2542. The examiner can normally be reached on Monday to Friday from 5:30 A.M. to 2:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Roy V. King, can be reached on (703)-308-1146.

The facsimile phone number for this Art Unit 1742 are (703) 305-3601 (Official Paper only) and (703) 305-7719 (Unofficial Paper only). When filing a FAX in Technology Center 1700, please indicate in the Header (upper right) "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and other communication with the PTO that are not for entry into the file of the application. This will expedite processing of your papers.

  
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**SIKYIN IP**  
**PRIMARY EXAMINER**